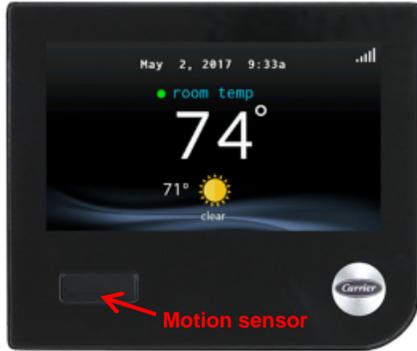# Carrier® Infinity® System Control (SYSTXCCITC01-B)
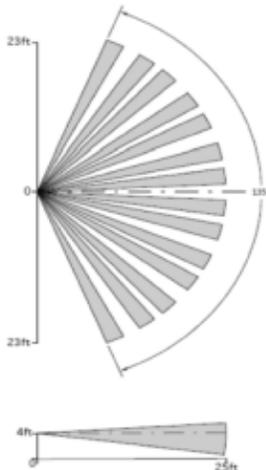## Occupancy Sensing Sequence of Operation

For Software Versions 1.1, 1.2…

Integrated motion sensor allows the system to make automatic set point changes, based on occupancy, to provide the optimum home comfort and energy savings.

The on-board PIR motion sensor is placed on the bottom left corner of the System Control. It is able to detect motion at least 25 feet directly in front of the sensor, and within 135° cone perpendicular to the wall. The motion detection pattern is shown as below.

Detection of motion happens as a person moves from one detection cone to the next. The closer to the control, the less lateral motion is required to detect motion; further away requires more lateral motion.
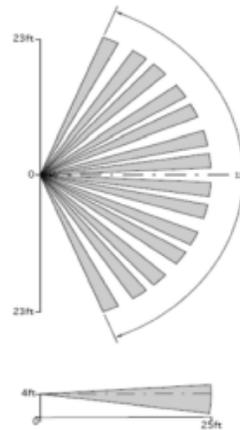

For Software Versions 1.3 and later…

Integrated motion sensor allows the system to make automatic Activity changes, based on occupancy, to provide the optimum home comfort and energy savings.

The on-board PIR motion sensor is placed on the bottom left corner of the System Control. It is able to detect motion at least 25 feet directly in front of the sensor, and within 135° cone perpendicular to the wall. The motion detection pattern is shown as below.
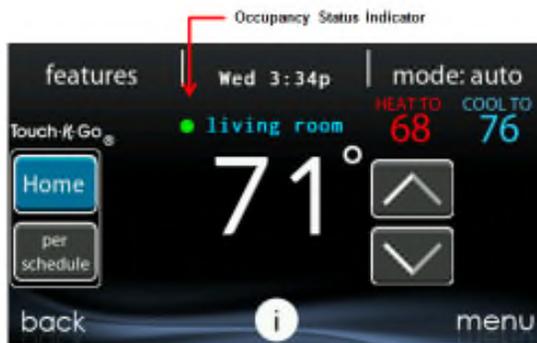
Detection of motion happens as a person moves from one detection cone to the next. The closer to the control, the less lateral motion is required to detect motion; further away requires more lateral motion.

Carrier® Infinity® System Control (SYSTXCCITC01-B)
Occupancy Sensing Sequence of Operation

Occupancy Status Indicator is available on the Home and Main screens on the System Control and Client Apps.

- When no movement is detected, the Occupancy Status indicator stays GRAY.
- When movement is detected, but the system hasn't yet determined that the space is occupied (example, someone is just walking through the room), the Occupancy Status indicator turns BLUE.
- When the system determines that the space is occupied, the Occupancy Status indicator turns GREEN.

The Occupancy Sensing feature can be enabled or disabled by the installer.

Occupancy sensing is disabled from the factory.

Occupancy Status Indicator is available on the Home and Main screens on the System Control and Client Apps.

- When no movement is detected, the Occupancy Status indicator stays GRAY.
- When movement is detected, but the system hasn't yet determined that the space is occupied (example, someone is just walking through the room), the Occupancy Status indicator turns BLUE.
- When the system determines that the space is occupied, the Occupancy Status indicator turns GREEN.
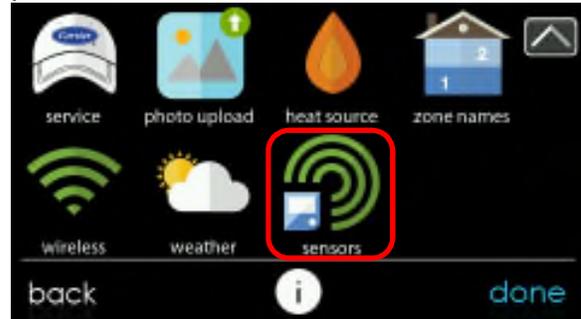

The Occupancy Sensing feature can be enabled or disabled under the 'sensors' icon.

Occupancy sensing is set to enabled from the factory.

Enabling and Disabling Occupancy Sensing

Step 1: Go to menu on the home screen and press 'sensors' icon.
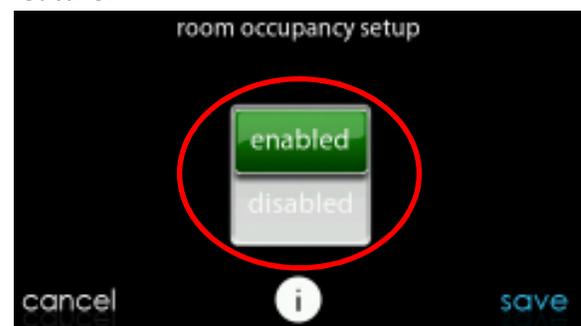

For non-zoning systems:
Step 2: Press 'home occupancy setup'.

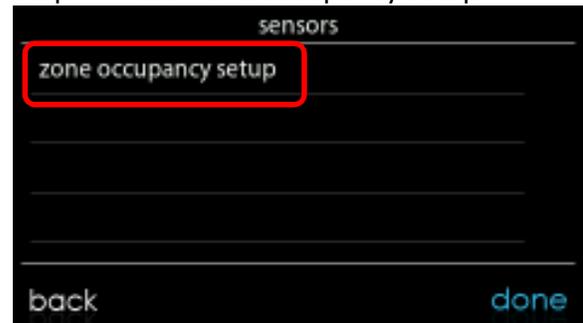Step 3: Enable or disable Occupancy Sensing feature.

NOTE: The default setting is 'enabled'.

For zoning systems:
NOTE: The motion/occupancy sensor on the main system control/thermostat is the sensor used for occupancy control in all zones. If the location of this sensor does not provide a good indication of occupancy for a particular zone, disable Occupancy Sensing for that zone.

Step 2: Press 'zone occupancy setup'.

Step 3: Enable or disable Occupancy Sensing feature.

NOTE: The default setting is 'enabled'.

NOTE: When Occupancy Sensing is disabled for a zone, occupancy detection has no effect on the scheduled activity settings and set points for that zone.

How does the Occupancy Sensing feature work?

A passive infrared (PIR) motion sensor detects motion events. System control counts the number of motion events within a defined period of time to determine if the space is occupied, versus someone simply walking through the room. The Occupied state sustains for one hour to account for stillness in the room while occupied.

When the Occupancy Sensing feature is enabled, automatic set point changes to HOME activity set points are activated when the space is occupied, regardless of scheduling feature being enabled or disabled.

NOTE: The Activity indication does not change, only the setpoint indication.

How does the Occupancy Sensing feature work?

A passive infrared (PIR) motion sensor detects motion events. System control counts the number of motion events within a defined period of time to determine if the space is occupied, versus someone simply walking through the room. The Occupied state sustains for two hours to account for stillness in the room while occupied. The Occupancy-sustain timer is reset to two hours each time occupancy is again detected for that space.

What happens when the space is unoccupied during a scheduled Home or Wake activity?
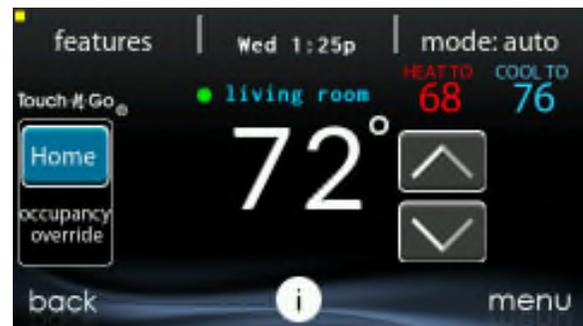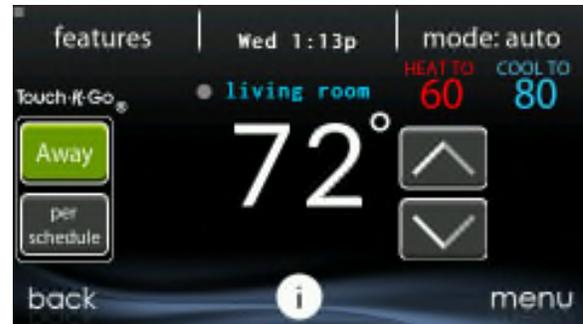When the Occupancy Sensing feature is enabled, the current scheduled activity is HOME or WAKE, and timing is "per schedule," the activity and set point(s) change to AWAY automatically when the space is determined to be Unoccupied.

What happens when the homeowner returns home earlier than planned?

When Occupancy Sensing feature is enabled, the current scheduled activity is AWAY or VACATION, and timing is "per schedule," the activity and set points change to HOME automatically when the space is determined to be Occupied.

SLEEP Activity

If the space is determined to be Unoccupied at the beginning of a period where the current scheduled activity is SLEEP and timing is "per schedule," the system will remain in the Unoccupied/Away status.

If the zone is determined to be Occupied at the start of the scheduled SLEEP activity, or becomes Occupied at any time during the scheduled SLEEP activity, the activity will enter and stay in SLEEP mode until the sleep period ends, even if the room is determined to be Unoccupied afterwards.
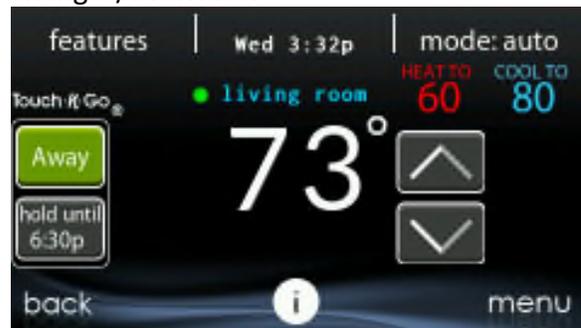
NOTE: The Occupancy status indicator will continue to indicate whether the space is determined to be Occupied or Unoccupied in the SLEEP activity.

HOLD/HOLD UNTIL
Any HOLD UNTIL activity will automatically disable Occupancy sensing Activity changes/overrides.

Once normal scheduling is resumed, Occupancy sensing will follow the Enabled/Disabled selection set by the user.

Whole House Activity

The "all zones HOME" or "all zones AWAY" activity will override Occupancy sensing Activity changes/overrides.

Once normal scheduling is resumed, Occupancy sensing will follow the Enabled/Disabled selection set by the user.